

company logo, identification, or the like, that can be pre-entered as a form into the controller 28. This form can then be merged with the title information to form an aesthetically pleasing label. Preferably, the title information will be recorded in a TIFF format (FAX format). The TIFF format is a commonly known format. Once the title information has been stored in the TIFF format on the CD-R 10, it can be recalled from the CD-R 10 when copying the digital information on the CD-R 10 to another recordable compact disk and used by the printer to reproduce the label on the other disk. Storing the title information in the TIFF format allows for an easy transfer of the title information to the printer.

The printer 30 can be constructed from parts used in commercially available laser or ink jet type printers. One commercially available printer having the necessary parts is the Canon Bubble Jet Printer BJ-200, available from Canon Inc., Tokyo, Japan. Alternatively, the parts used in commercially available ink jet printers can be modified and scaled down to reduce the size of the combined CD recorder 24 and printer 30.

The method for individually labelling the compact disk using the system 22 will next be described. The storage location 26 having the digital information is first transferred to the controller 28. Preferably, this will be accomplished by placing the controller 28 in communication with the storage location 26 and downloading the information in the storage location 26 into the controller 28. As previously described, the controller 28 may have a memory large enough to house all of the information in the storage location 26. In this case, the information in the storage location 26 can be originally entered into the controller 28.

The CD-R 10 is placed in the disk tray 36. The digital information is sent from the controller 28 to the compact disk recorder 24. After the disk tray 36 delivers the CD-R 10 into the recording chamber 34, the digital information is recorded on the CD-R 10. The controller 28 extracts title information from the data stream delivered to the CD recorder 24. This title information is transferred to the printer 30 and the print head 38 ejects ink on the CD-R 10 to produce a visual label as the CD-R 10 is either delivered to or ejected from recording chamber 34. The title information extracted by the controller 28 can be a part of the digital information originally contained in the storage location 26, or the title information can be manually entered by the user terminal 32 into the controller 28. When the title is manually entered into the controller 28 by the user terminal 32, a second digital data stream is created. The controller 28 is able to direct this second digital data stream having the title information to the printer 30 at the time that the digital information from the storage location 26 is recorded in the CD-R 10. In this manner, the controller 28 insures that the manually entered title information will be printed on the correct CD-R 10.

Alternatively, the CD recorder 24 can extract the title information from the digital data stream and deliver the title information to the printer 30. The print head 38 will produce the title on the labeling portion 16 of the CD-R 10 as previously described in connection with FIG. 1.

FIG. 4 shows a system 40 for printing a label directly on a recordable compact disk at a printing station located outside a recording device just prior to or after the time that digital information is recorded on the disk. The system 40 is configured so that it is able to record information on one disk while printing a label on another disk. The system 40 has a storage location 42, a controller 44, a user terminal 46, and a CD recorder 48 that are substantially identical to the CD

recorder 24, the storage location 26, the controller 28, and the user terminal 32 of FIG. 3. The difference between the system 40 of FIG. 4 and the system 22 of FIG. 3 is that a printer 50 is located outside the CD recorder 48. Thus, the CD-R 10 does not have a label printed on it while either being delivered to or ejected from the CD recorder 48 by a disk tray 52. Instead, the printer 50 is located outside of the CD recorder 48 so that the CD-R 10 can travel through the printer 50 to receive a label either directly before or directly after being delivered to the CD recorder 48.

The system 40 is particularly advantageous when the CD recorder 48 is used to record a number of CD-Rs in sequence. By physically locating the printer 50 outside the CD recorder 48, recording times and labeling times can be overlapped. The printer 50 is placed outside of the CD recorder 48 so that while one CD-R 10 is being recorded, another CD-R that has just had information recorded thereon, or is next in line to be recorded, can have a label placed thereon.

To assist in recording multiple CD-Rs, some compact disk recorders, such as one produced by Eastman Kodak Company, supply blank disks in disk packs containing 75 disks. The blank disks are stored in a blank disk stack 54. A mechanical arm or other automated mechanism (not shown) automatically delivers a disk from the blank disk stack 54 to the CD recorder 48. After the CD-R 10 is recorded, it is automatically removed from the CD recorder 48 and delivered to an output stack 56. This pattern is followed until each disk in the blank stack 54 is recorded and placed in the output stack 56.

The printer 50 is located between the CD recorder 48 and the output stack 56, so that a label can be printed on the disk before reaching the output stack 56. Alternatively, the printer 50 can be placed between the blank stack 54 and the CD recorder 48 so that the label is printed on the disk before reaching the compact disk recorder 48. System 40 therefore allows a number of blank CD-Rs to be recorded in sequence and to have an individual label printed on each disk. The label has title information that uniquely identifies the digital information recorded on the disk immediately before or after being delivered to the compact disk recorder 48. This eliminates any manual labelling of CD-Rs after reaching the output stack 56, and also increases the speed with which a number of CD-Rs can be recorded in sequence and labeled.

The printer 50 can be a conventional ink jet printer that has been adapted to receive a CD-R. The conventional ink jet printer will be modified so that the CD-R can travel in a straight path through the printer without being bent. The CD-R will be supported in a tray in order to protect the recording surface of the CD-R as the CD-R 10 passes through the printer 50. In one embodiment, the mechanism used to transfer the CD-Rs to and from the CD recorder 48 can be modified to perform the additional task of delivering the CD-R 10 to the printer 50 and removing the CD-R 10 from the printer once the label has been placed thereon.

The method for individually labelling the CD-R 10 using the system 40 will next be described. The method of delivering the digital information to the controller 44 and from the controller 44 to the CD recorder 48 and/or the printer 50 is substantially identical to the method described in connection with FIG. 3. The CD-R 10 is initially placed in the blank stack 54. The automatic mechanism (not shown) automatically delivers the CD-R 10 from the blank stack 54 to the disk tray 52. The disk tray 52 then delivers the CD-R 10 to the CD recorder 48 which records the digital information thereon. The CD-R 10 is then ejected from the CD